

Please amend the claims as follows:

1-54 (cancelled)

55. (new) A method for selective cytolysis of a target cell, comprising:

contacting said target cell with an adenovirus vector comprising a cell type-specific transcriptional regulatory element (TRE) operably linked to a first adenovirus gene essential for replication selected from the group consisting of E1A, E1B and E4, wherein when said adenovirus vector enters said target cell, expression of said adenovirus gene under control of said cell type-specific TRE occurs and selective cytolysis of said target cell results.

56. (new) The method according to claim 55, wherein said target cell is a cancer cell.

57. (new) The method according to claim 55, wherein said first cell type-specific transcriptional response element (TRE) is selected from the group consisting of a prostate specific antigen transcriptional regulatory element (PSA-TRE), a probasin transcriptional regulatory element (PB-TRE), a human glandular kallikrein transcriptional regulatory element (hKLK2-TRE), an alpha-fetoprotein transcriptional regulatory element (AFP-TRE), a carcinoembryonic antigen transcriptional regulatory element (CEA-TRE), and a mucin transcriptional regulatory element (MUC-TRE).

58. (new) The method according to claim 55, wherein said adenovirus vector further comprises a transgene.

59. (new) The method according to claim 58, wherein said transgene is a cytotoxic gene.

60. (new) The method according to claim 59, wherein said cytotoxic gene is HSV-thymidine kinase (HSV-tk) or cytosine deaminase (cd).

61. (new) The method according to claim 58, wherein said transgene is a cytokine gene.

62. (new) The method according to claim 61, wherein said cytokine is GM-CSF.

63. (new) The method according to claim 55, wherein said adenovirus vector further

comprises the coding sequence for adenovirus death protein (ADP).

64. (new) The method according to claim 63, wherein the amino acid sequence for said ADP coding is presented as SEQ ID NO:10 or SEQ ID NO:11.

65. (new) The method according to claim 63, wherein said ADP coding sequence is inserted in the E3 region.

66. (new) The method according to claim 57, wherein said first cell type-specific TRE is a prostate specific TRE selected from the group consisting of a PSA-TRE, a PB-TRE and an hKLK2-TRE.

67. (new) The method according to claim 66, wherein said first cell type-specific TRE is a PSA-TRE.

68. (new) The method according to claim 66, wherein said first cell type-specific TRE is a PB-TRE.

69. (new) The method according to claim 66, wherein said first cell type-specific TRE is an hKLK2-TRE.

70. (new) The method according to claim 67, wherein said PSA-TRE comprises a prostate specific antigen enhancer and promoter.

71. (new) The method according to claim 67, wherein said prostate specific antigen enhancer comprises nucleotides -5322 and -3739 relative to the transcription start site of prostate specific antigen gene.

72. (new) The method according to claim 67, wherein said prostate specific antigen promoter comprises nucleotides -540 to +8 relative to transcription start site of prostate specific antigen gene.

73. (new) The method according to claim 55, wherein said adenovirus vector further comprises a second cell type-specific TRE.

74. (new) The method according to claim 73, wherein said first and second cell type-specific TREs are different.

75. (new) The method according to claim 73, wherein said first and second cell type-specific TREs are substantially identical.

76. (new) The method according to claim 73, wherein said target cell is a cancer cell.

77. (new) The method according to claim 73, wherein said first cell type-specific transcriptional response element (TRE) is selected from the group consisting of a prostate specific antigen transcriptional regulatory element (PSA-TRE), a probasin transcriptional regulatory element (PB-TRE), a human glandular kallikrein transcriptional regulatory element (hKLK2-TRE), an alpha-fetoprotein transcriptional regulatory element (AFP-TRE), a carcinoembryonic antigen transcriptional regulatory element (CEA-TRE), and a mucin transcriptional regulatory element (MUC-TRE).

78. (new) The method according to claim 73, wherein said adenovirus vector further comprises a transgene.

79. (new) The method according to claim 78, wherein said transgene is a cytotoxic gene.

80. (new) The method according to claim 79, wherein said cytotoxic gene is HSV-thymidine kinase (HSV-tk) or cytosine deaminase (cd).

81. (new) The method according to claim 78, wherein said transgene is a cytokine gene.

82. (new) The method according to claim 81, wherein said cytokine is GM-CSF.

83. (new) The method according to claim 73, wherein said adenovirus vector further comprises the coding sequence for ADP.

84. (new) The method according to claim 73, wherein the amino acid sequences encoded by said ADP coding sequence is presented as SEQ ID NO:10 or SEQ ID NO:11.

85. (new) The method according to claim 83, wherein said ADP coding sequence is inserted in the E3 region.

86. (new) The method according to claim 77, wherein said second cell type-specific TRE is a prostate specific TRE selected from the group consisting of a PSA-TRE, a PB-TRE and an hKlk2-TRE.

87. (new) The method according to claim 86, wherein said second cell type-specific TRE is a PSA-TRE.

88. (new) The method according to claim 86, wherein said second cell type-specific TRE is a PB-TRE.

89. (new) The method according to claim 86, wherein said second cell type-specific TRE is an hKlk2-TRE.

90. (new) The method according to claim 87, wherein said PSA-TRE comprises a prostate specific antigen enhancer and promoter.

91. (new) The method according to claim 90, wherein said prostate specific antigen enhancer comprises nucleotides -5322 and -3739 relative to the transcription start site of prostate specific antigen gene

92. (new) The method according to claim 87, wherein said prostate specific antigen promoter comprises nucleotides -540 to +8 relative to transcription start site of prostate specific antigen gene.